



# PUBLIC NOTICE

US Army Corps  
of Engineers  
New York District  
Jacob K. Javits Federal Building  
New York, N.Y. 10278-0090  
ATTN: Regulatory Branch

**In replying refer to:**  
Public Notice Number: NAN-2006-3259-WOR  
Issue Date: July 20, 2007  
Expiration Date: August 20, 2007

## To Whom It May Concern:

The New York District, Corps of Engineers has received an application for a Department of the Army permit pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344).

APPLICANT: Robert Kolinsky  
19 Barrie Lane  
Spring Valley, NY 10977

ACTIVITY: Discharge fill material into approximately 1.467 acres of waters of the United States, including wetlands, for the construction of a residential subdivision.

WATERWAY: Unnamed Tributary to the Walkill River (Hudson River Watershed)

LOCATION: Town of Shawangunk, Ulster County, New York.

A detailed description and plans of the applicant's activity are enclosed to assist in your review.

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

ALL COMMENTS REGARDING THE PERMIT APPLICATION MUST BE PREPARED IN WRITING AND MAILED TO REACH THIS OFFICE BEFORE THE EXPIRATION DATE OF THIS NOTICE, otherwise, it will be presumed that there are no objections to the activity.

CENAN-OP-RW  
PUBLIC NOTICE NO. NAN-2006-3259-WOR

Any person may request, in writing, before this public notice expires, that a public hearing be held to collect information necessary to consider this application. Requests for public hearings shall state, with particularity, the reasons why a public hearing should be held. It should be noted that information submitted by mail is considered just as carefully in the permit decision process and bears the same weight as that furnished at a public hearing.

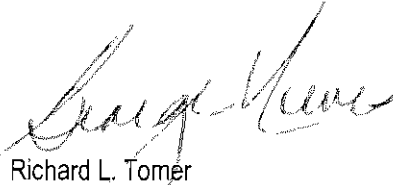
Our preliminary determination is that the activity for which authorization is sought herein is not likely to affect any Federally endangered or threatened species or their critical habitat. However, pursuant to Section 7 of the Endangered Species Act (16 U.S.C. 1531), the District Engineer is consulting with the appropriate Federal agency to determine the presence of and potential impacts to listed species in the project area or their critical habitat.

In a letter dated May 6, 2003, the New York State Office of Parks, Recreation and Historic Preservation stated that the project will have No Effect upon cultural resources in or eligible for inclusion in the National Register of Historic Places.

Reviews of activities pursuant to Section 404 of the Clean Water Act include application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404 (b) of the Clean Water Act. On July 29, 2003, the New York State Department of Environmental Conservation stated that they waive the requirements for a water quality certification for this project in accordance with Section 401 of the Clean Water Act.

It is requested that you communicate the foregoing information concerning the activity to any persons known by you to be interested and who did not receive a copy of this notice. If you have any questions concerning this application, you may contact this office at (917) 790-8413 and ask for Brian A. Orzel.

For more information on New York District Corps of Engineers programs, visit our website at <http://www.nan.usace.army.mil>

*for*   
Richard L. Tomer  
Chief, Regulatory Branch

Enclosures

### WORK DESCRIPTION

The applicant, Robert Kolinsky, has requested Department of the Army authorization for the discharge of fill material into approximately 1.467 acres of waters of the United States, including wetlands, in association with the construction of a 19-lot residential subdivision, known as Grandview Estates II. The site is located on Grandview Terrace in the Town of Shawangunk, Ulster County, New York.

Approximately 0.399 acres of the overall 1.467 acres of fill material would be new fill for the extension of Grandview Terrace. Approximately 1.068 acres would be maintained as already filled.

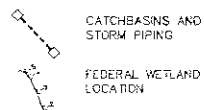
The applicant proposes a wetland mitigation plan which would include the establishment of approximately 3.69 acres of wetlands.

It should be noted that the 1.068 acres of existing fill was completed without prior Department of the Army authorization. The New York District Corps of Engineers, having reviewed the matter, has declined at this time to initiate legal proceedings for the undertaking of the unauthorized work. The decision concerning approval of a permit rests with a determination of the probable impact on the public interest of allowing the fill to remain.

The stated purpose of this proposed work is to construct a residential subdivision.

UPLAND HARDWOOD FOREST	72.06 A.C.
IMPERVIOUS	0.08 A.C.
BRUSH/WEED/GRASS MIXTURE	4.30 A.C.
FORESTED WETLAND	22.46 A.C.
TOTAL AREA	98.90 A.C.

# LEGEND



- STONEWALL
- IMPERVIOUS
- BRUSH/WEED/GRASS MIXTURE
- UPLAND HARDWOOD FOREST
- FORESTED WETLAND

LIMITS OF  
FORESTED  
WETLAND

LIMITS OF  
FORESTED  
WETLAND

LIMITS OF  
FORESTED  
WETLAND

GRANDVIEW TERRACE

BRUSH/WEED/GRASS MIXTURE

LIMITS OF  
FORESTED  
WETLAND

MATURE UPLAND  
HARWOOD FOREST

MATURE UPLAND  
HARWOOD FOREST

MATURE UPLAND  
HARWOOD FOREST

REPRESENTS LIMITS OF FEDERAL WETLAND  
FLAGGED BY ECOLOGICAL SOLUTIONS INC.  
IN NOVEMBER 2001

LAT: 74°07'30"  
LONG: 41°34'30"



**M. GILLESPIE & ASSOCIATES**  
**CONSULTING ENGINEERING, P.L.L.C.**  
847 ROUTE 376 · WAPPINGERS FALLS, NY 12590  
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FEDERAL WETLAND  
IMPACT & MITIGATION PLAN

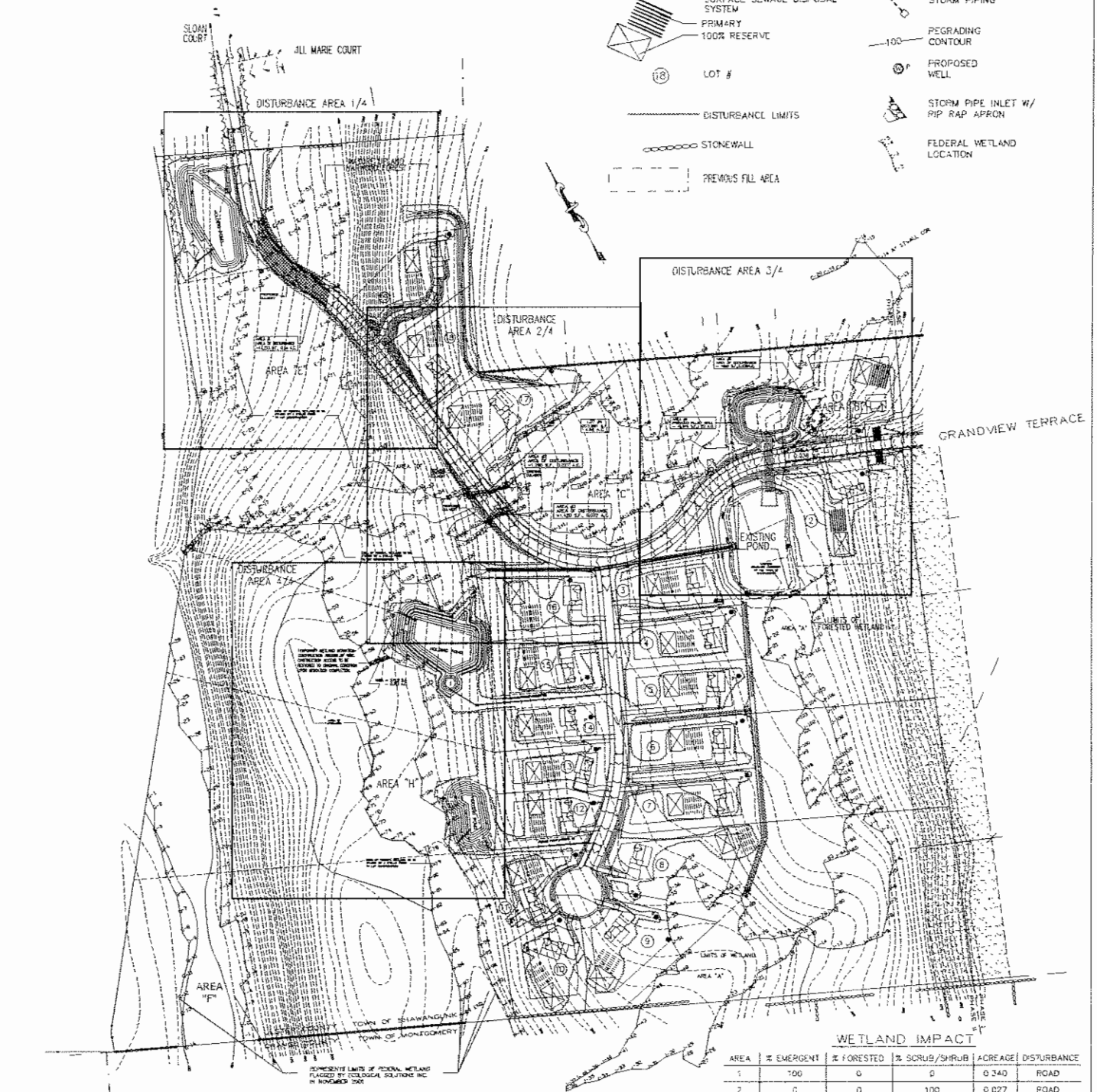
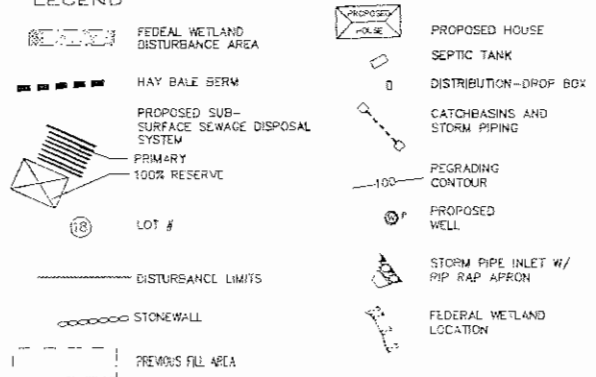
EXISTING AREA MAP FOR:  
GRANDVIEW ESTATES  
SHEET 1 OF 10

SCALE: 1" = 400'

TOWN OF SHAWANGUNK  
ULSTER COUNTY, NEW YORK

EAT: 7/10/00  
LONG: 41°34'30"

# LEGEND



## FEDERAL WETLANDS - PHASE II TOTAL AREA

AREA A	4.30 A.C.
AREA B	0.04 A.C.
AREA C	2.96 A.C.
AREA D	0.14 A.C.
AREA E	5.19 A.C.
AREA F	3.16 A.C.
AREA H	6.67 A.C.
TOTAL WETLAND	22.46 A.C.

## DISTURBANCE TABLE

DISTURBANCE AREA "1"	0.34 A.C.
DISTURBANCE AREA "2"	0.027 A.C.
DISTURBANCE AREA "3"	0.032 A.C.
DISTURBANCE AREA "4"	1.03 A.C.
DISTURBANCE AREA "5"	0.038 A.C.
TOTAL WETLAND DISTURBANCE	1.467 A.C.

## WETLAND IMPACT

AREA	% EMERGENT	% FORESTED	% SCRUB/SHRUB	ACREAGE	DISTURBANCE
1	100	0	0	0.340	ROAD
2	0	0	100	0.027	ROAD
3	100	0	0	0.032	ROAD
4	0	100	0	1.03	PREVIOUS FILL
5	100	0	0	0.038	PREVIOUS FILL

TOTAL WETLAND DISTURBANCE = 1.467 A.C.

## WETLAND MITIGATION

AREA	% FORESTED	% SCRUB/SHRUB	ACREAGE
A	40	60	3.69



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## FEDERAL WETLAND IMPACT & MITIGATION PLAN

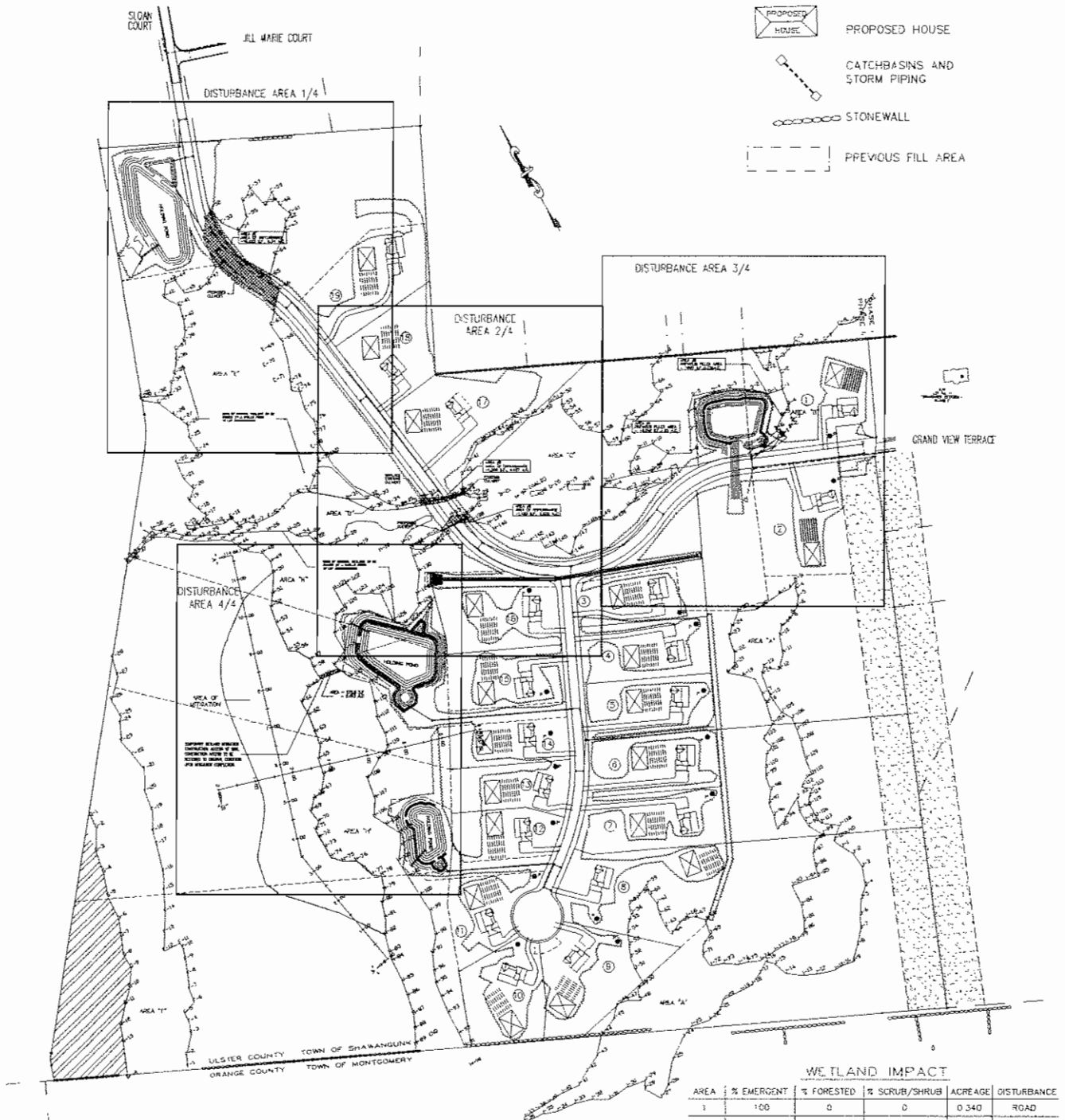
SITE AREA MAP FOR:  
GRANDVIEW ESTATES  
SHEET 2 OF 10

SCALE: 1" = 400'

TOWN OF SHAWANGUNK  
ULSTER COUNTY, NEW YORK

UPLAND HARDWOOD FOREST	48.91 A.C.
IMPERVIOUS	6.00 A.C.
BRUSH/WEED/GRASS MIXTURE	18.24 A.C.
FORESTED WETLAND	25.75 A.C.
TOTAL AREA	98.90 A.C.

	FEDERAL WETLAND DISTURBANCE AREA
(15)	LOT #
	DISTURBANCE LIMITS
	PROPOSED HOUSE
	CATCHBASINS AND STORM PIPING
	STONEWALL
	PREVIOUS FILL AREA



#### FEDERAL WETLANDS -- PHASE II TOTAL AREA

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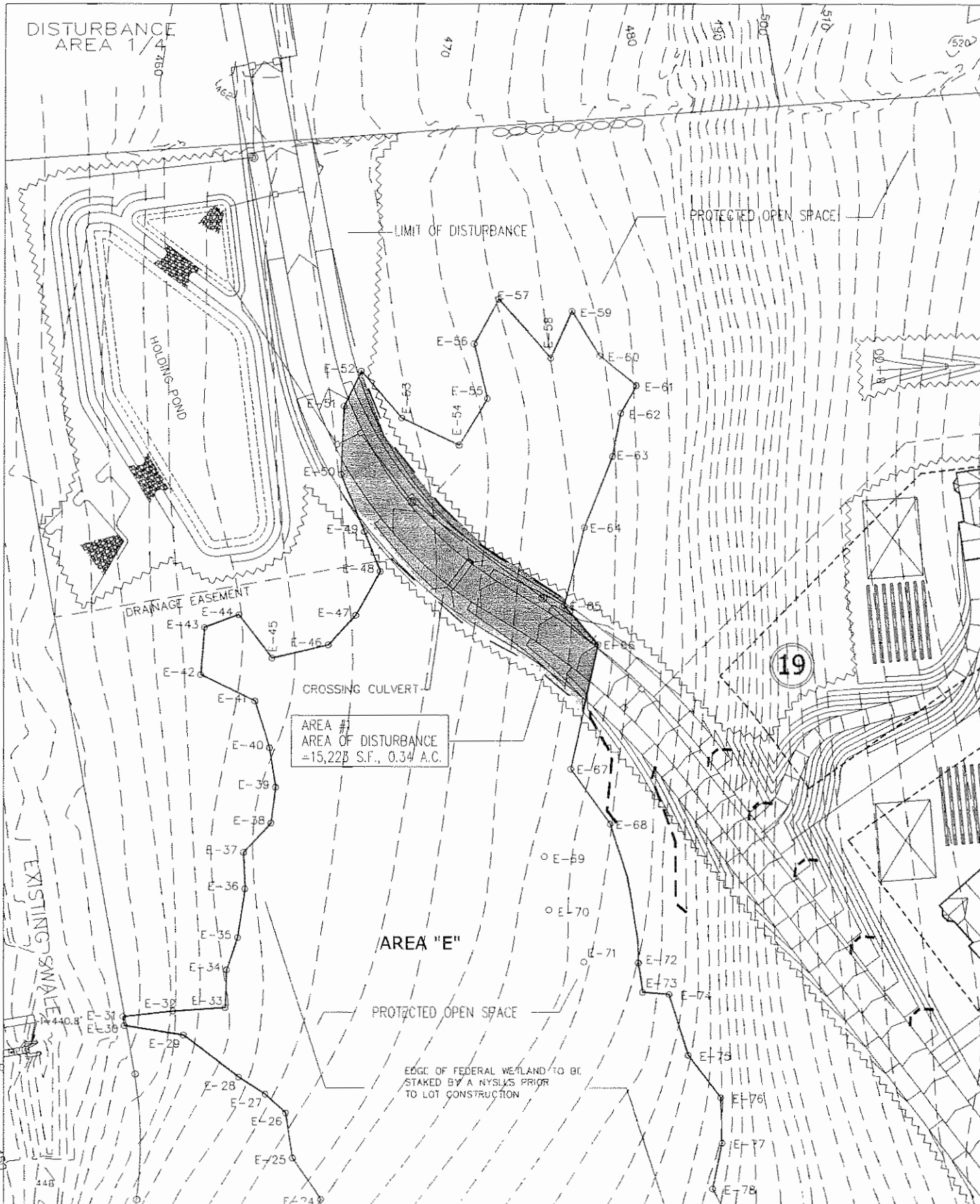
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**CONSULTING ENGINEERING, P.L.L.C.**  
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FEDERAL WETLAND  
 IMPACT & MITIGATION PLAN

ROAD/LOT MAP FOR  
 GRANDVIEW ESTATES  
 SHEET 3 OF 10

SCALE: 1" = 400'

TOWN OF SHAWANGUNK  
 ULSTER COUNTY, NEW YORK



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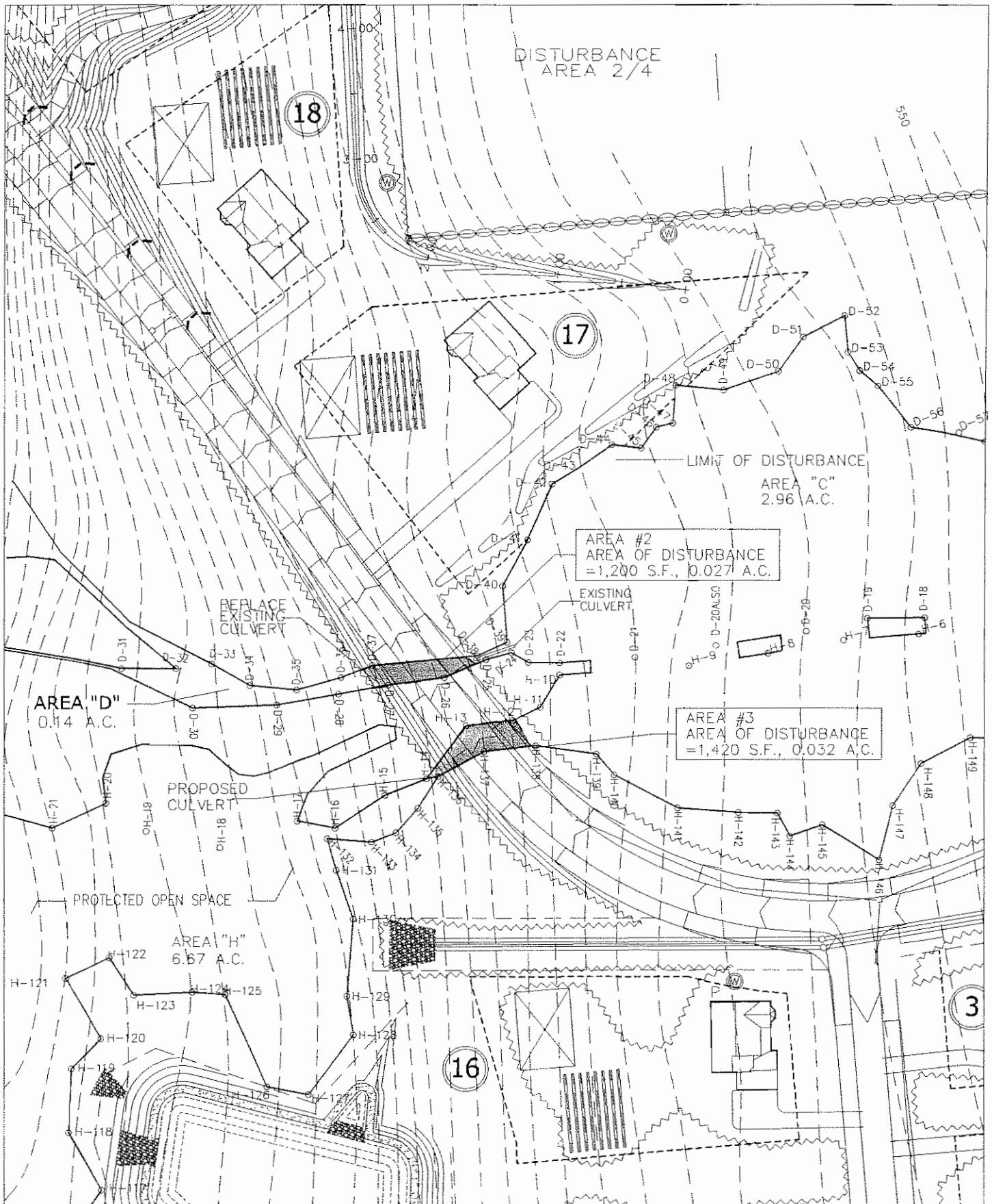
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FEDERAL WETLAND  
 IMPACT & MITIGATION PLAN

DISTURBANCE AREA 1/4  
 GRANDVIEW ESTATES  
 SHEET 4 OF 10

SCALE: 1" = 100'

TOWN OF SHAWANGUNK  
 ULSTER COUNTY, NEW YORK



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FEDERAL WETLAND  
 IMPACT & MITIGATION PLAN

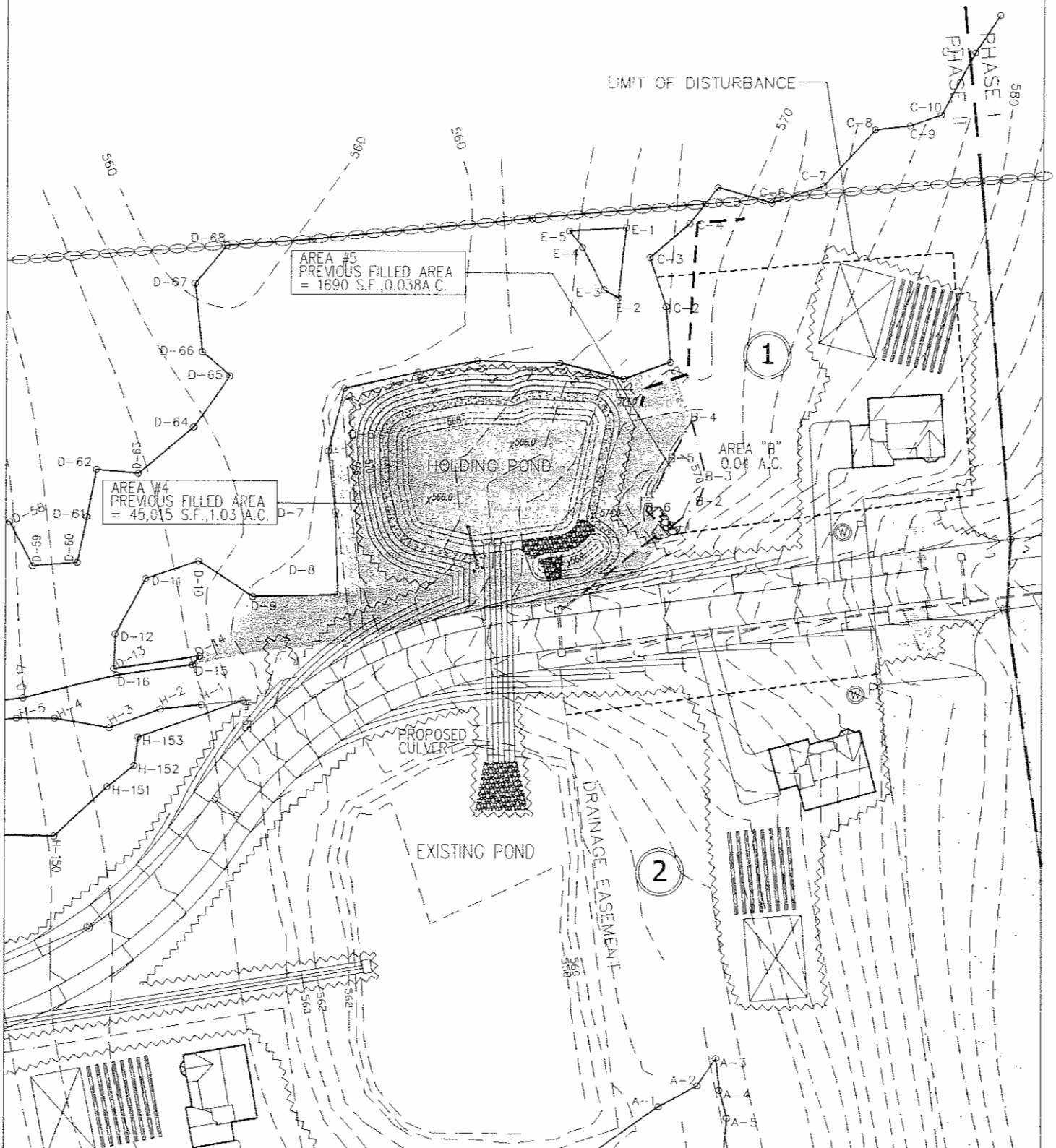
DISTURBANCE AREA 2/4  
 GRANDVIEW ESTATES  
 SHEET 5 OF 10

SCALE: 1" = 100'

TOWN OF SHAWANGUNK  
 ULSTER COUNTY, NEW YORK



DISTURBANCE  
AREA 3/4



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FEDERAL WETLAND  
IMPACT & MITIGATION PLAN

DISTURBANCE AREA 3/4  
GRANDVIEW ESTATES  
SHEET 6 OF 10

SCALE: 1" = 100'

TOWN OF SHAWANGUNK  
ULSTER COUNTY, NEW YORK

DISTURBANCE  
AREA 4/4

16

WETLAND MITIGATION AREA  
TOTAL AREA = 3.69 AC.

LIMIT OF DISTURBANCE

AREA = 575.6 S.F.  
= 0.013 AC

TEMPORARY WETLAND  
MITIGATION CONSTRUCTION  
ACCESS 10' WIDE  
CONSTRUCTION ACCESS TO BE  
RESTORED TO ORIGINAL  
CONDITION UPON MITIGATION  
COMPLETION.

HOLDING POND

DRAINAGE EASEMENT

AREA "H"  
6.67 A.C.

DRAINAGE EASEMENT

HOLDING POND

EDGE OF FEDERAL WETLAND TO BE  
STAKED BY A NYSLS PRIOR  
TO LOT CONSTRUCTION



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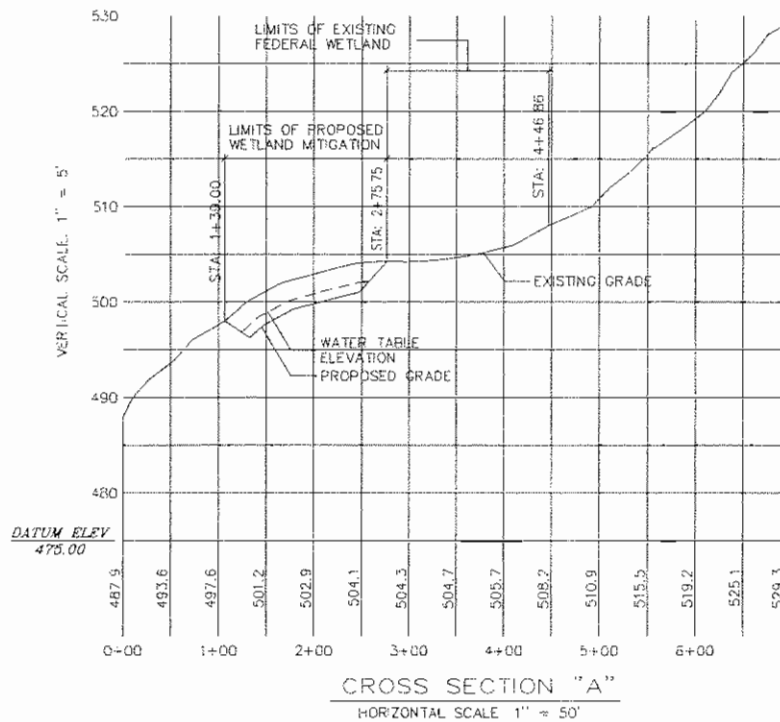
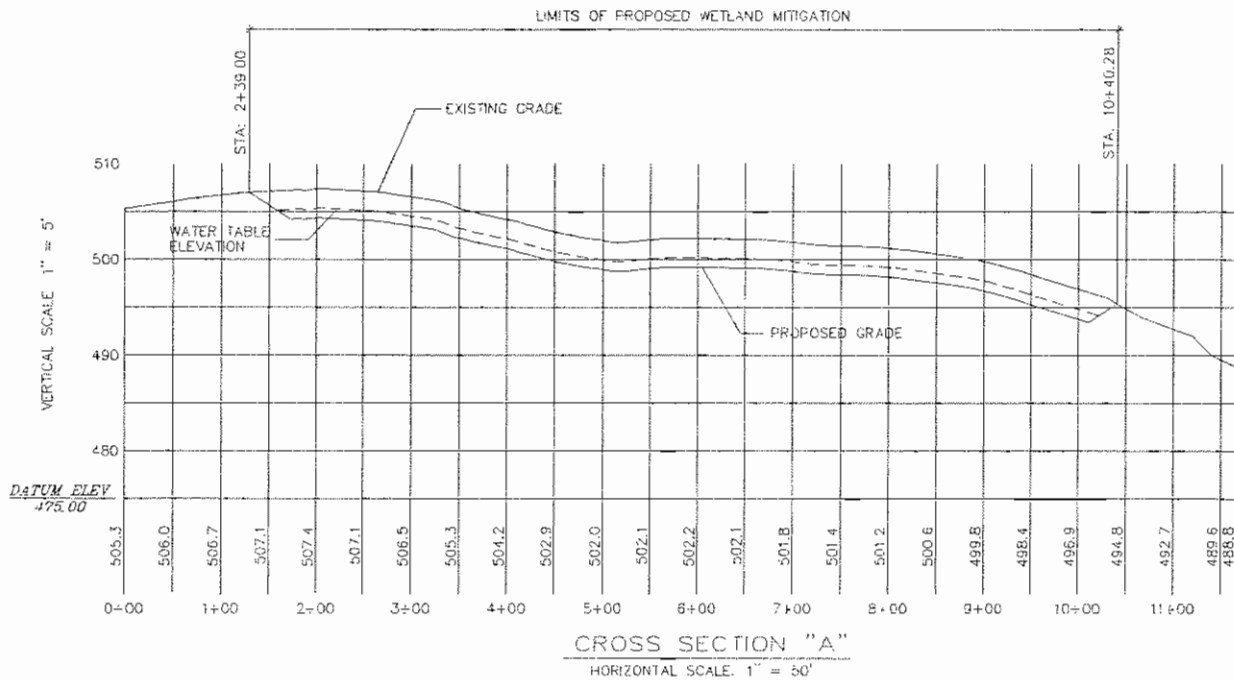
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FEDERAL WETLAND  
IMPACT & MITIGATION PLAN

REGRADE PLAN FOR:  
GRANDVIEW ESTATES  
SHEET 7 OF 10

SCALE: 1" = 100'

TOWN OF SHAWANGUNK  
ULSTER COUNTY, NEW YORK



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FEDERAL WETLAND  
IMPACT & MITIGATION PLAN

MITIGATION PROFILES  
GRANDVIEW ESTATES  
SHEET 8 OF 10

SCALE: AS NOTED

TOWN OF SHAWANGUNK  
ULSTER COUNTY, NEW YORK

# PLANTING LEGEND



PO-68

PW-68

IB-20

RC-59

WB-128

PW-69

WB-58

SM-78

RM-155

SM-78

PO-68

IB-38

HB-155

SP-38

## WETLAND IMPACT

AREA	% EMERGENT	% FORESTED	% SCRUB/SHRUB	ACREAGE	DISTURBANCE
1	100	0	0	0.408	ROAD
2	0	0	100	0.029	ROAD
3	100	0	0	0.033	ROAD
4	0	100	0	1.63	PREVIOUS FILL
5	100	0	0	0.038	PREVIOUS FILL

TOTAL WETLAND DISTURBANCE = 1.457 A.C.

## WETLAND AREA'S

FOREST TOTAL = 64,453 S.F. ~ 40%  
 SHRUB TOTAL = 96,614 S.F. ~ 60%  
 AREA TOTAL = 161,067 S.F.

## PLANTING SCHEDULE

SYM.	BOTANICAL NAME	COMMON NAME	COND.	SIZE	SPACING	QTY	SYM.
SM	ACER SACCHARINUM	SILVERMAPLE	BARE ROOT	3'-4' HT	7'-0" O.C.	156	SM
PO	QUERCUS PALUSTRIS	PIN OAK	BARE ROOT	3'-4' HT	7'-0" O.C.	136	PO
RM	ACER RUBRUM	RED MAPLE	BARE ROOT	3'-4' HT	7'-0" O.C.	155	RM
PW	SALIX DISCOLOR	PUSSY WILLOW	BARE ROOT	15'-18" HT	5'-0" O.C.	137	PW
WB	ILEX VERTICILLATA	WINTERBERRY	BARE ROOT	15'-18" HT	5'-0" O.C.	186	WB
RC	ARONIA ARBUTIFOLIA	RED CHOKEBERRY	BARE ROOT	18'-24" HT	5'-0" O.C.	118	RC
IB	ILEX GLABRA	INKBERRY	BARE ROOT	18'-24" HT	5'-0" O.C.	58	IB
HB	VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY	BARE ROOT	18'-24" HT	5'-0" O.C.	155	HB
SP	CLETHRA ALNIFOLIA	SWEET PEPPERBUSH	BARE ROOT	18'-24" HT	5'-0" O.C.	38	SP



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FEDERAL WETLAND  
 IMPACT & MITIGATION PLAN

PLANTING PLAN FOR:  
 GRANDVIEW ESTATES  
 SHEET 9 OF 10

SCALE: 1" = 100'

TOWN OF SHAWANGUNK  
 ULSTER COUNTY, NEW YORK

## LANDSCAPING NOTES:

### 1. QUALITY ASSURANCE

- NOMENCLATURE: PLANT NAMES SHALL CONFORM TO THE LATEST EDITION OF "STANDARDIZED PLANT NAMES" AS ADOPTED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE.
- SIZE AND GRADING: PLANT SIZES AND GRADING SHALL CONFORM TO THE LATEST EDITION OF "AMERICAN STANDARD FOR NURSERY STOCK" AS SPONSORED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. (AAN), UNLESS OTHERWISE SPECIFIED.
- NURSERY SOURCE: OBTAIN FRESHLY DUG, HEALTHY, VIGOROUS, PLANTS NURSERY GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR A MINIMUM OF 2 YEARS. PLANTS SHALL HAVE BEEN LINED OUT IN ROWS, ANNUALLY CULTIVATED, SPRAYED, PRUNED, AND FERTILIZED IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE. ALL PLANTS SHALL HAVE BEEN TRANSPLANTED OR ROOT PRUNED AT LEAST ONCE IN THE PAST 3 YEARS. BALLED AND BURLAPPED PLANTS MUST COME FROM SOIL WHICH WILL HOLD A FIRM ROOT BALL. HEELED IN PLANTS AND PLANTS FROM COLD STORAGE ARE NOT ACCEPTABLE.

- SUBSTITUTIONS: DO NOT MAKE SUBSTITUTIONS OF TREES AND/OR SHRUB MATERIALS. IF REQUIRED LANDSCAPE MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON-AVAILABILITY AND PROPOSAL FOR USE OF EQUIVALENT MATERIAL WHEN AUTHORIZED. ADJUSTMENTS OF CONTRACT AMOUNT (IF ANY) WILL BE MADE BY CHANGE ORDER.

### 2. SEEDING & PLANTING SEASONS AND TIMING CONDITIONS:

- UNLESS OTHERWISE DIRECTED IN WRITING, SEED FROM MARCH 15 TO MAY 15, AND FROM AUGUST 15 TO OCTOBER 15.
- UNLESS OTHERWISE DIRECTED IN WRITING THE PLANTING OF TREES AND SHRUBS SHALL BE FROM MARCH 15 TO JUNE 1, AND FROM SEPTEMBER 1 TO NOVEMBER 15.
- PROCEED WITH AND COMPLETE SEEDING WORK AS RAPIDLY AS PORTIONS OF THE SITE BECOME AVAILABLE, WORKING WITHIN THE SEASONAL LIMITATIONS FOR EACH KIND OF LANDSCAPE WORK REQUIRED.
- PROVIDE TEMPORARY ANNUAL RYEGRASS COVER FOR SEEDING OUTSIDE PERMITTED SEEDING PERIODS.

### 3. PRODUCTS:

- TOPSOIL: THE TOP 6" - 12" OF ROOTSTOCK MATERIAL WILL BE TAKEN FROM WETLAND DISTURBANCE AREAS AND PLACED AS BEDDING MATERIAL IN THE PROPOSED WETLAND MITIGATION AREA. IF ADDITIONAL TOPSOIL IS NEEDED USE IMPORTED TOPSOIL AS NOTED BELOW.
- IMPORTED TOPSOIL: PLACE TOPSOIL 6" TO 8" THICK CONFORMING TO THE FOLLOWING:
  - ORIGINAL LOAM TOPSOIL, WELL DRAINED HOMOGENEOUS TEXTURE AND OF UNIFORM GRADE, WITHOUT THE ADMIXTURE OF SUBSOIL MATERIAL AND FREE OF DENSE MATERIAL, HARDPAN, CLAY, STONES, SOD OR OTHER OBJECTIONABLE FOREIGN MATERIAL.
  - CONTAINING NOT LESS THAN 5% NOR MORE THAN 20% ORGANIC MATTER IN THAT PORTION OF A SAMPLE PASSING A 1/4" SIEVE WHEN DETERMINED BY THE WET COMBUSTION METHOD ON A SAMPLE DRIED AT 105° C.
  - CONTAINING A pH VALUE WITHIN THE RANGE OF 6.5 TO 7.5 ON THAT PORTION OF THE SAMPLE WHICH PASSES A 1/4" SIEVE.
  - CONTAINING THE FOLLOWING WASHED GRADATIONS:

SIEVE DESIGNATION	% PASSING
1"	100
1/4"	97 - 100
NO. 200	20 - 65 (OF THE 1/4" SIEVE)

#### C. SEED MIXTURE:

SUPPLEMENTAL WETLAND SEED MIX IS TO BE APPLIED TO ALL MITIGATION AREA AT 4 POUNDS OF SEED PER ACRE AND CONSIST OF THE FOLLOWING:

#### NORTHEAST WETLAND DIVERSITY SEED MIX

% BY WT.	SPECIES	VARIETY
26.66%	EUPATORIUM PERFORIATUM	BDNESET
20.80%	VERBENA HASTATA	BLUE VERVAIN
19.75%	PANICUM DICHOTOMIFLORUM	SMOOTH PANIC-GRASS
8.89%	SOLIDAGO RUGOSA	WRINKLED GOLDENROD
8.74%	EUPATORIUM MACULATUM	JOE PYE WEED
6.65%	EUTHAMIA GRAMINIFOLIA	GRASS LEAF GOLDENROD
4.59%	POLYGONUM PENNSYLVANICUM	PENNSYLVANIA SMARTWEED
2.80%	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER
0.79%	BIDENS CERNUA	NODDING BEGGAR'S TICK
0.21%	ASCLEPIAS INCARNATA	SWAMP MILKWEED
0.12%	IRIS VERSICOLOR	BLUE FLAG

- LIME: NATURAL LIMESTONE CONTAINING AT LEAST 85% OF TOTAL CARBONATES, GROUND TO SUCH FINENESS THAT AT LEAST 90% PASSES A 10-MESH SIEVE AND AT LEAST 50% PASSES A 100-MESH SIEVE.

#### D. FERTILIZER:

- FOR SPRING SEEDING, COMMERCIAL STARTER FERTILIZER, GRANULAR, NONBURNING PRODUCT CONTAINING 10% NITROGEN, 6% AVAILABLE PHOSPHORUS, AND 4% WATER SOLUBLE POTASH (10-6-4).
- FOR FALL SEEDING, COMMERCIAL STARTER FERTILIZER, GRANULAR, NONBURNING PRODUCT, CONTAINING 5% NITROGEN, 10% AVAILABLE PHOSPHORUS, AND 5% WATER SOLUBLE POTASH (5-10-5).
- FOR FINAL FERTILIZING, IF APPLIED IN SPRING SEASON, SHALL BE A SLOW RELEASE COMMERCIAL FERTILIZER, GRANULAR, WITH HIGH NITROGEN, 38% URAMITE OR APPROVED EQUAL. IF APPLIED IN FALL SEASON, SHALL BE AS SPECIFIED IN (3.D.2) ABOVE.

#### E. TREES AND SHRUBS:

- PLANTING SOIL MIXTURE: SHALL BE PREMIXED IN BULK, AND CONTAIN THE FOLLOWING BY VOLUME:

20 PARTS TOPSOIL
10 PARTS PEAT MOSS
1 PART BONE MEAL

- PEAT MOSS: BROWN TO BLACK IN COLOR, WEED AND SEED FREE, DRIED SPHAGNUM PEAT MOSS, CONTAINING NOT MORE THAN 9% MINERAL ON A DRY BASIS AND CONFORMING TO NYSDOT 713-20.
- BONE MEAL: FINELY GROUND, RAW, MINIMUM 4% NITROGEN AND 20% PHOSPHORIC ACID. IT SHALL BE DELIVERED IN SEALED BAGS SHOWING THE MANUFACTURER'S GUARANTEED ANALYSIS.
- STAKES: 8 FT LONG, 2 IN WIDE WOOD STAKES
- HOSE: NEW, 2-PLY GARDEN HOSE NOT LESS THAN 1/2 INCH IN DIAMETER.
- MULCH: GROUND OR SHREDDED BARK, MEDIUM SIZE FROM HARDWOOD TREES, NO PIECES OVER 2 INCHES GREATEST DIMENSION. FREE FROM SAWDUST, STONES, DEBRIS, AND DELETERIOUS MATERIALS. STANDARD OF QUALITY SHALL BE MANUFACTURED BY HYDE PARK PRODUCTS CO., OF NEW ROCHELLE, NEW YORK, OR APPROVED EQUAL.
- PROVIDE COMPLETE COMMERCIAL FERTILIZER, OF NEUTRAL CHARACTER, WITH SOME ELEMENTS DERIVED FROM ORGANIC SOURCES, CONTAINING AT LEAST 10% AVAILABLE PHOSPHORIC ACID, 3% TO 5% TOTAL NITROGEN, AND 3% TO 5% SOLUBLE POTASH.

## CONSTRUCTION NOTES:

- ALL DISTURBED AREAS ARE TO BE REPAIRED INCLUDING BRINGING GRADES BACK TO ORIGINAL CONDITION BY IMPORTING TOPSOIL AND SUPPLYING NECESSARY SOIL AMENDMENTS PRIOR TO SEEDING AND WATERING.
- THE TEMPORARY CONSTRUCTION ACCESS FOR THE WETLAND MITIGATION AREA WILL BE RESTORED TO ORIGINAL CONDITIONS UPON COMPLETION OF THE WETLAND MITIGATION.
- THE TEMPORARY CONSTRUCTION ACCESS WILL BE 10 FEET WIDE. TREES AND SHRUBS WILL BE CUT TO GRADE AND STUMPS WILL REMAIN. PLANTS WILL BE USED TO ALLOW CONSTRUCTION EQUIPMENT ACCESS. THE CONSTRUCTION ACCESS AREA WILL BE RETURNED TO ORIGINAL CONDITION.

## SOIL PREPARATIONS AND VEGETATIVE ESTABLISHMENT

TEST PITS CONFIRM THE PRESENCE OF MINERAL SOIL HORIZONS AT VARYING DEPTHS IN THE MITIGATION AREA, SO THAT THE EXISTING SOIL FERTILITY IS EXPECTED TO BE ADEQUATE FOR THE ESTABLISHMENT AND GROWTH OF WETLAND PLANTINGS AND SEED. ADDITIONAL SOIL AMENDMENTS ARE NOT EXPECTED TO BE REQUIRED, SINCE THE PROPOSED VEGETATIVE COVER TYPES WILL THRIVE IN A WIDE RANGE OF SOIL CONDITIONS, WITH pH VALUES FROM SLIGHTLY ACIDIC TO NEUTRAL. BASELINE SOIL ANALYSIS FOR THE MITIGATION AREA AND ADJACENT WETLAND, HOWEVER, WILL BE INDISPENSABLE IN THE MONITORING AND ASSESSMENT PHASE OF THE RELATIVE SUCCESS OR FAILURE OF THE MITIGATION EFFORT.

THE COMBINATION OF FORESTED WETLAND WITH EMERGENT AND SCRUB/SHRUB WETLAND MITIGATION AREA IS EXPECTED TO ENSURE VEGETATIVE ESTABLISHMENT AND LONG-TERM SURVIVAL, EVEN UNDER SUMMER CONDITIONS. THE DESIGN OF THIS SYSTEM WILL MAXIMIZE SURFACE WATER AVAILABILITY TO BOTH WETLAND PLANTINGS, AND AREA TO BE SEEDING WITH HERBACEOUS WETLAND SPECIES.

THE FINISHED GRADES OF THE MITIGATION AREA WILL CREATE AN INCREASING MOISTURE GRADIENT FROM THE EXISTING UPLANDS THROUGH THE MITIGATION AREA THAT WILL IMPROVE CHANCES FOR ESTABLISHMENT OF A DIVERSE WETLAND COMMUNITY. THESE FINISHED GRADES ALSO WILL MAKE USE OF SEASONAL FLUCTUATIONS IN SURFACE WATER ELEVATIONS, WHICH ARE WIDELY RECOGNIZED AS CRUCIAL TO SEED GERMINATION WETLAND PLANT SPECIES.

THE REMAINDER OF THE TERRAIN WILL BE SEEDING WITH A MIXTURE OF HERBACEOUS, WET MEADOW SPECIES IN ORDER TO STABILIZE SOILS AND ESTABLISH A PERENNIAL WETLAND VEGETATIVE COMMUNITY.

## HYDROLOGY OF THE MITIGATION AREAS

TWO (2) DEEP BORINGS WERE INSTALLED IN THE PROPOSED MITIGATION AREA TO PREDICT THE WATER LEVELS AVAILABLE FOR THE PROPOSED WETLAND PLANTINGS. TEST PITS WERE DUG DURING THE SITE INVESTIGATION WITHIN THE MITIGATION AREAS ON MARCH 2002. THE RESULTS OF THESE TEST PITS GENERALLY CONFIRMED THE SOIL STRATIFICATION SUGGESTED IN THE ULSTER COUNTY SOIL SURVEY. THE FIELD INVESTIGATION REVEALED THAT ORGANIC MATTER APPROXIMATELY 8 INCHES DEEP EXISTS WITHIN THE MITIGATION AREA. BENEATH THIS LAYER EXISTS A (2' - 5') LAYER OF CLAY AND CR IN SOME LOCATIONS, SILTY CLAY. THIS IMPERMEABLE LAYER ALSO CONTAINS TILL. GROUNDWATER WAS OBSERVED IN THE TEST PITS.

THE ULSTER COUNTY SOIL SURVEY\* INDICATES THAT THE MITIGATION AREA CHARACTERIZED BY SOIL OF THE MARDIN SERIES (MgB).

THE MARDIN SERIES CONSISTS OF MODERATELY DRAINED SILT LOAMS THAT FORMED ON BROAD DIVIDES, HILLTOPS, AND RIDGES. MARDIN SOILS ARE SEASONALLY SATURATED EACH YEAR. PERMEABILITY IS MODERATELY SLOW OR SLOW BECAUSE OF THE MODERATELY SLOW OR SLOWLY PERMEABLE FRACIPAN, THESE SOILS ARE WET EARLY IN SPRING AND AFTER HEAVY RAINS. THEY OFTEN REMAIN WET UNTIL LATE IN SPRING AND ARE OCCASIONALLY WET IN FALL. IT IS ANTICIPATED THAT SURFACE AND GROUND WATER WILL COLLECT IN THE MITIGATION AREAS IN SUFFICIENT AMOUNTS TO SUPPORT WETLAND VEGETATION.

THE EXISTING WETLAND WILL SERVE AS A "REGENERATION NUCLEUS" FROM WHICH VEGETATIVE COVER CAN EXPAND RADIIALLY BY VEGETATIVE REPRODUCTION INTO THE PROPOSED MITIGATION AREA. SINCE DIFFERENT PLANT SPECIES WITHIN THE SAME WETLAND MAY OFTEN EXHIBIT A WIDE RANGE OF MOISTURE REQUIREMENTS AND FLOODING TOLERANCES, THE PROPOSED ELEVATIONAL RANGES WILL PROVIDE A MICRO-TOPOGRAPHIC MOISTURE GRADIENT CONDUCTIVE TO A HIGH SPECIES DIVERSITY.

\* SOIL SURVEY OF ULSTER COUNTY, NEW YORK.



## M. GILLESPIE & ASSOCIATES CONSULTING ENGINEERING, P.L.L.C.

847 ROUTE 376 - WAPPINGERS FALLS, NY 12590  
P. (845) 227-6227 F. (845) 226-1430  
WWW.MGILLESPIEASSOCIATES.COM

## FEDERAL WETLAND IMPACT & MITIGATION PLAN

MISC. NOTES FOR:  
GRANDVIEW ESTATES  
SHEET 10 OF 10

SCALE: AS NOTED

TOWN OF SHAWANGUNK  
ULSTER COUNTY, NEW YORK